

CLAIMS

What is claimed is:

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1. A hand-held computer device, comprising:
 - a processor, forming a part of the handheld computer;
 - a display coupled to the processor forming a part of the handheld computer, the display having resolution of $M \times N$ pixels;

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a browser program running on the processor that facilitates retrieving and viewing of a web page on the display, the web page having a size greater than $M \times N$;
the browser having associated program code for transcoding the web page to a format adapted to the display.

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2. The apparatus according to claim 1, wherein the associated program code comprises a browser plug-in.

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3. The apparatus according to claim 1, wherein the associated program code comprises code that generates a menu of frames from the web page to permit a user to select a desired frame for display.

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4. The apparatus according to claim 1, wherein the associated program code comprises code that compresses an image to a size suitable for display on the $M \times N$ resolution display.

5. The apparatus according to claim 4, wherein the image has size and pixel depth, and wherein the associated program code comprises code compresses the image by reducing the image's size and reducing the image's pixel depth.

6. The apparatus according to claim 1, wherein the associated program code comprises code that converts multiple columns into a single column for display on the MxN resolution display.

5 7. The apparatus according to claim 6, wherein the associated program code converts multiple columns into a single column for display on the MxN resolution display by removing redundant table definition tags.

8. The apparatus according to claim 1, wherein the associated program code
10 comprises code that:

generates a menu of frames from the web page to permit a user to select a desired frame for display;

compresses images to a size suitable for display on the MxN resolution display;
and

15 converts multiple columns into a single column for display on the MxN resolution display.

9. A hand-held computer device, comprising:
- a processor, forming a part of the handheld computer;
 - a display coupled to the processor forming a part of the handheld computer, the display having resolution of $M \times N$ pixels;
- 5 a browser program running on the processor that facilitates retrieving and viewing of a web page on the display, the web page having a size greater than $M \times N$;
- the browser having associated program code in the form of a browser plug-in for transcoding the web page to a format adapted to the display by:
 - generating a menu of frames from the web page to permit a user to select
 - 10 a desired frame for display by selecting frame titles as menu selections;
 - compressing an image to a size suitable for display on the $M \times N$ resolution display, wherein the image has size and pixel depth, by reducing the image's size and reducing the image's pixel depth; and
 - converting multiple columns into a single column for display on the $M \times N$ resolution display by removing redundant table definition tags.

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10. A method of transcoding a web page within a hand-held computer device with display having resolution of MxN, comprising:
- determining if the web page contains multiple frames, and if so generating a menu of frames from the web page to permit a user to select a desired frame for
5 display;
- determining if the web page contains any images, and if so compressing the images to a size suitable for display on the MxN resolution display; and
- determining if the web page contains multiple columns, and if so converting the multiple columns into a single column for display on the MxN resolution display.
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11. The method according to claim 10, wherein the image has size and pixel depth, and wherein the compressing comprises reducing the image's size and reducing the image's pixel depth.
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12. The method according to claim 10, wherein the converting comprises removing redundant table definition tags.
13. The method according to claim 10, wherein the method is carried out in a browser program operating on a processor residing in the hand-held computer device.
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14. The method according to claim 13, wherein the method is carried out in one or more browser plug-in programs.
15. An electronic storage medium storing instructions that, when executed on a
25 programmed processor forming a part of a hand-held computer, carries out the process according to claim 10.

16. A method of transcoding a web page within a hand-held computer device with display having resolution of MxN, comprising:
determining if the web page contains multiple frames; and
if the web page contains multiple frames, generating a menu of frames from the
5 web page to permit a user to select a desired frame for display.
17. The method according to claim 16, wherein the method is carried out in a browser program operating on a processor residing in the hand-held computer device.
- 10 18. The method according to claim 17, wherein the method is carried out in one or more browser plug-in programs.
- 15 19. An electronic storage medium storing instructions that, when executed on a programmed processor forming a part of a hand-held computer, carries out the process according to claim 16.

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20. A method of transcoding a web page within a hand-held computer device with display having resolution of $M \times N$, comprising:
- determining if the web page contains an image; and
if the web page contains an image, compressing the image to a size suitable for
5 display on the $M \times N$ resolution display
21. The method according to claim 20, wherein the image has size and pixel depth, and wherein compressing comprises reducing the image's size and reducing the image's pixel depth.
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22. The method according to claim 20, wherein the method is carried out in a browser program operating on a processor residing in the hand-held computer device.
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23. The method according to claim 22, wherein the method is carried out in one or more browser plug-in programs.
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24. An electronic storage medium storing instructions that, when executed on a programmed processor forming a part of a hand-held computer, carries out the process according to claim 20.

25. A method of transcoding a web page within a hand-held computer device with display having resolution of MxN, comprising:
determining if the web page contains multiple columns; and
if the web page contains multiple columns, converting the multiple columns into a
5 single column for display on the MxN resolution display.
26. The method according to claim 25, wherein the converting comprises removing redundant table definition tags.
- 10 27. The method according to claim 25, wherein the method is carried out in a browser program operating on a processor residing in the hand-held computer device.
- 15 28. The method according to claim 27, wherein the method is carried out in one or more browser plug-in programs.
29. An electronic storage medium storing instructions that, when executed on a programmed processor forming a part of a hand-held computer, carries out the process according to claim 25.

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